

STEREO DOUBLE CASSETTE TAPE DECK

KX-64W/644W

KENWOOD

INSTRUCTION MANUAL

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____

Unpacking

Unpack the unit carefully and make sure that all accessories and cables are put aside so they will not be lost.

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Before applying power

Important!

U.S.A., Canada, Australia, UK and Europe

These units are not equipped with an AC voltage selector switch and the discussion of such a switch that follows should be disregarded.

All other countries

Units shipped to countries other than the U.S.A., Canada, Australia, UK and Europe are equipped with an AC voltage selector switch on the rear panel.

Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

This unit operates on 120 volts or 220-240 volts AC. The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

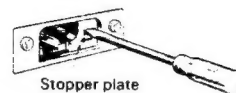


120V ~
Setting

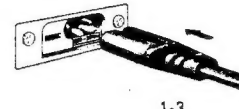


220V - 240V ~
Setting

1-1



Stopper plate
1-2



1-3

Fig. 1

- 1 Before plugging in this unit, make sure that the position of the AC Voltage Selector conforms to your line (mains) voltage. If not, it must be reset. See Figure 1-1.
- 2 To reset the selector, slide the stopper plate to the opposite side with a screwdriver or other pointed tool. See Figure 1-2.
- 3 Insert the power cord securely. See Figure 1-3.

For United Kingdom

The mains plug must be removed from the wall socket prior to any internal examination.

Important

The wires in this mains lead are coloured in accordance with the following code:

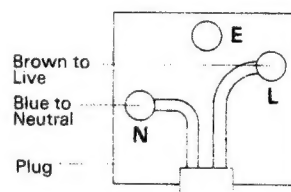
Blue..... Neutral
Brown..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour

Blue..... N or Black
Brown..... N or Black

Plug terminal marking



Notes:

1. If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS APPLIANCE TO
RAIN OR MOISTURE.

Safety precautions

<p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p>	<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>
	<p>The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.</p>
	<p>The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.</p>



Controls, indicators and connectors

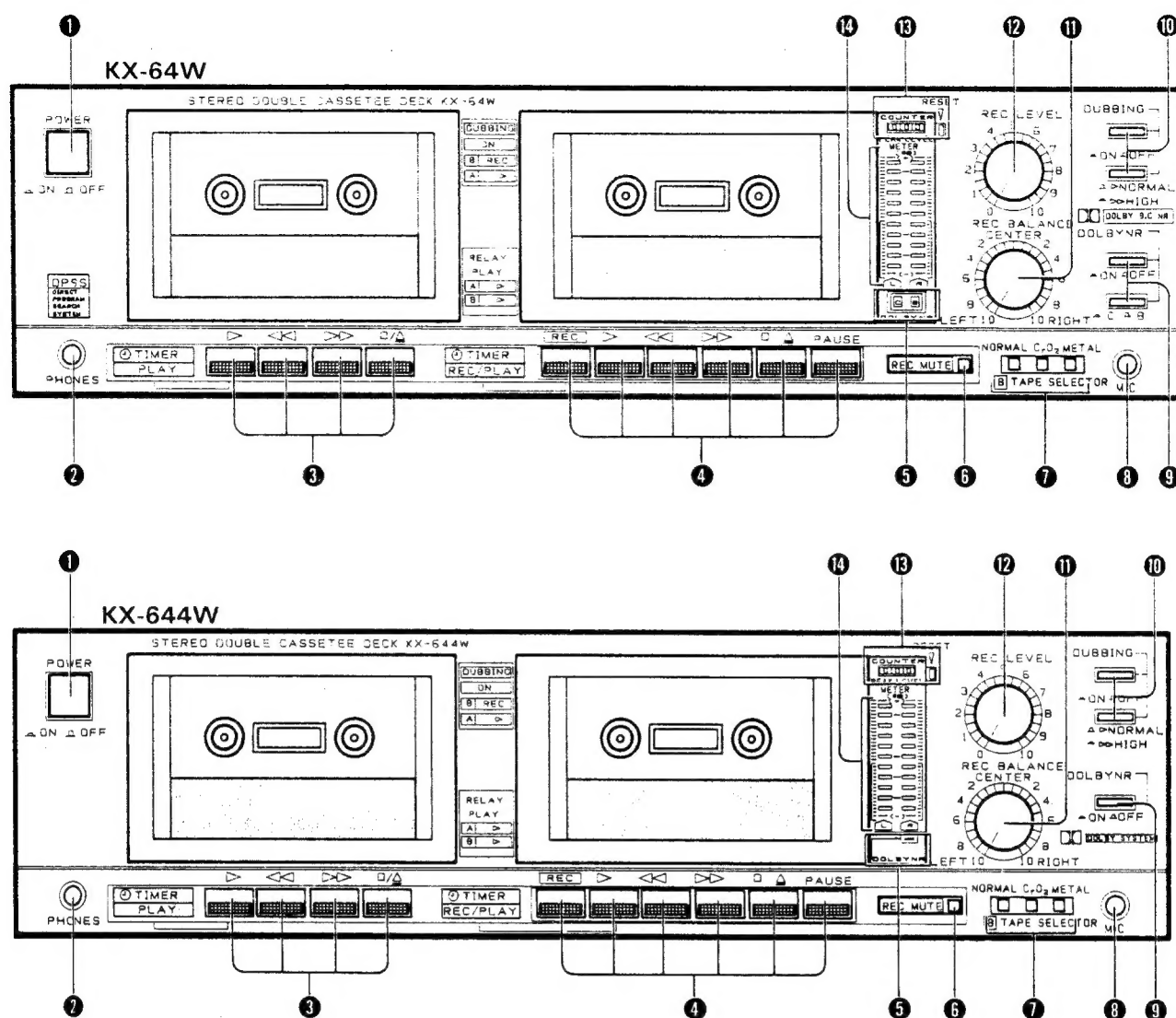


Fig. 2

1 POWER switch

Press this switch to turn on the power.
To turn it off, press the switch again.

2 PHONES jack

Plug the stereo headphones into this jack.

③ A deck operation keys (KX-64W)

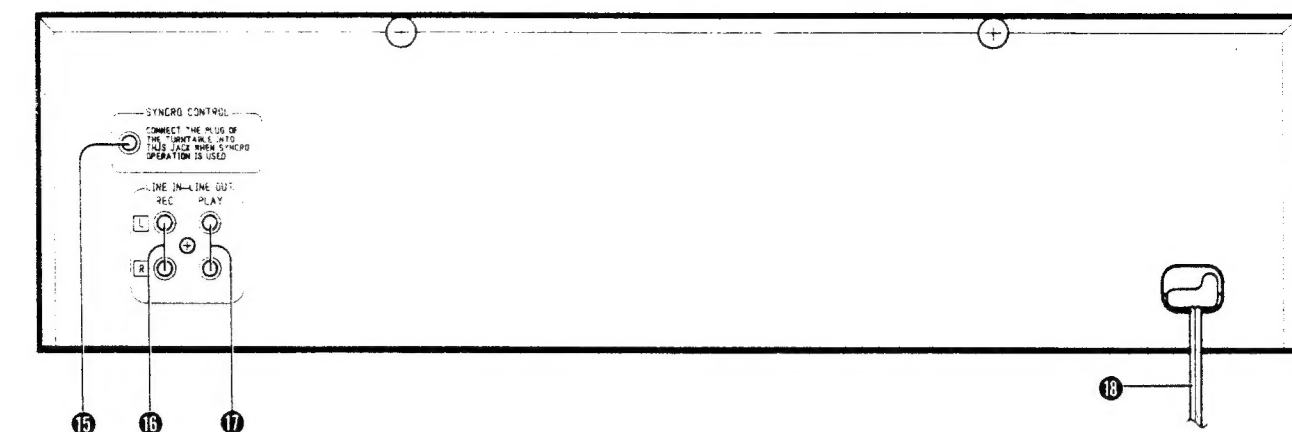
- Play key (▶)
Used to play back a tape.
- Rewind key (◀◀)
Used to rewind the tape. Depressing this key during playback results in repeat playback of the current tune.
- Fast forward key (▶▶)
Used to rapidly advance the tape. When this key is pressed during playback, the tape is advanced to the next tune.
- Stop/eject key (□/⏏)
When this key is pressed, the previous mode is released and the tape stops. When the key is pressed again, the cassette holder slides forward.

③ A deck operation keys (KX-644W)

- Play key (▶)
Used to play back a tape.
- Rewind key (◀◀)
Used to rewind the tape.
- Fast forward key (▶▶)
Used to rapidly advance the tape.
- Stop/eject key (◻/◻)
When this key is pressed, the previous mode is released and the tape stops. When the key is pressed again, the cassette holder slides forward.

④ B deck operation keys

- REC key
This key is for B deck only, and cannot be used for A deck. Press this key to start recording. It is not necessary to press the play key (▶) simultaneously. However, be sure the unit is in stop mode when starting recording.
- Play key (▶)
Same as that for A deck.
- Rewind key (◀◀)
Used to rewind the tape.
- Fast forward key (▶▶)
Used to rapidly advance the tape.



(KX-64W
only)

Fig. 3

○ Stop/eject key (□/△):

Same as that for A deck.

○ PAUSE key

When this key is pressed during playback or recording, the unit stops temporarily.

To release playback pause mode, press the key again. When the PAUSE key is pressed during dubbing/high-speed dubbing, A deck keeps running and B deck enters pause mode. To release dubbing/high-speed dubbing pause mode, press the key again.

⑤ DOLBY NR indicator (KX-64W)

Lights up when the DOLBY NR switch is set to ON. When the DOLBY NR selector is set to B-TYPE, the right B indicator lights. When the selector is set to C-TYPE, the left C indicator lights.

⑤ DOLBY NR indicator (KX-644W)

Lights up when the DOLBY NR switch is set to ON.

⑥ REC MUTE key

Press this key during recording to provide a blank section of about 4 seconds for DPSS operation. (DPSS → KX-64, A deck)

⑦ TAPE SELECTOR switch (B deck only)

Set record and playback characteristics to optimize performance for the particular type of tape in use.

Note:

With A deck, once the cassette is loaded, the tape bias and equalization are automatically set according to the holes provided in the cassette shell.

⑧ MIC jack

Plug the microphone into this jack.

⑨ DOLBY NR switches (KX-64W)

To record or play back a tape with Dolby NR, set the upper switch to ON. To select Dolby C NR, set the lower switch to in position. To select Dolby B NR, set the lower switch to out position.

⑨ DOLBY NR switches (KX-644W)

To record or play back a tape with Dolby NR, set the switch to ON.

⑩ DUBBING key (▷), High-speed DUBBING key (▷▷)

Use these keys to start dubbing/high-speed dubbing. See page 5.

Note:

Be sure not to touch the switch except dubbing.

⑪ REC BALANCE control

Used to adjust the recording level balance between right and left channels. Set to the center position for normal operation.

⑫ REC LEVEL control

Used to adjust the input level during recording.

⑬ TAPE COUNTER, RESET button

The TAPE COUNTER provides a means of locating sections on the tape. To start recording, set the TAPE COUNTER to "000" by pressing the RESET button.

⑭ PEAK LEVEL meter

Indicates the peak values of the input level for recording or the output level for playback.

⑮ Synchro terminal (KX-64W only)

Used for synchro recording with turntable KD74F/KD-64F.

Note:

Do not connect to the synchro terminal of turntables other than KD-74F/KD-64F.

⑯ REC/LINE IN jacks

Connect to the TAPE REC jacks of your amplifier or receiver, using the audio cable supplied.

⑰ PLAY/LINE OUT jacks

Connect to the TAPE PLAY jacks of your amplifier or receiver, using the audio cable supplied.

⑱ Power cord

Plug into a convenient AC outlet

System connections

Connection by audio cables

Two pairs of red and white audio cables with standard phono plugs attached (i.e. PLAY/LINE OUT cables and REC/LINE IN cables) are provided with your KX-64W. The colors are to identify the right and left stereo channels; red indicates the right channel and white the left channel.

Use of these cables is recommended for optimum performance in terms of noise and frequency response.

To protect your speakers, turn off all power before making any system connections.

Make connections as follows:

1. Connect the left and right PLAY/LINE OUT plugs to the Tape Play jacks on your amplifier or receiver.
2. Connect the REC/LINE IN plugs to the Tape Rec (record) jacks on your amplifier or receiver.

Connection by synchro cord (KX-64W only)

See page 4.

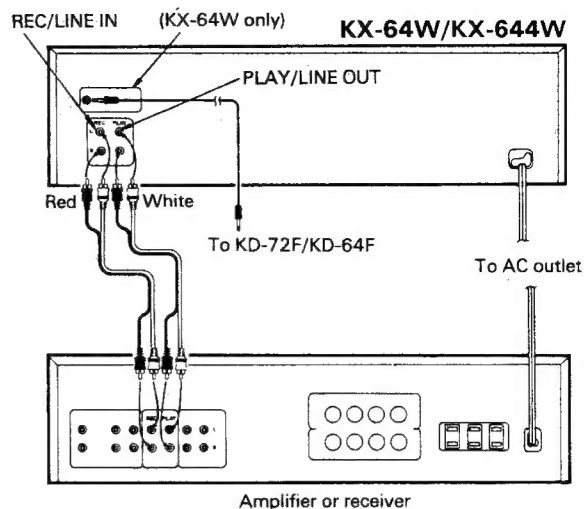


Fig. 4

Installation notes

- Install the unit on a flat, vibration-free rigid table.
- Do not place the unit near a heat producing equipment such as a radiator. Avoid direct sunlight.
- The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).
- Do not store or use the unit in a dusty location or in a moist atmosphere. Select a location where air is well ventilated.
- Keep the unit away from a source of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.
- Operate the unit on rated power supply voltage ($\pm 5\%$). Irregular power voltage will result in incorrect operation.

Tape playback

1. Depress the POWER switch.
2. Press the stop/eject key (\square/\triangle) of the A or B deck to open the cassette holder and insert a cassette.
3. When B deck is used for playback, press the TAPE SELECTOR switch according to the type of tape used.
4. To playback the tape recorded with Dolby NR, select the correct Dolby NR with the DOLBY NR switches.
5. Press the play key (\triangleright).

How to leave a blank section

To obtain the best performance from DPSS, blank sections are essential. With the REC MUTE key, a blank section can be provided easily. Use this feature to eliminate unwanted sections during FM broadcast recording. To provide a blank section for DPSS operation, keep the key pressed for at least 4 seconds.
(DPSS → KX-64W, A deck only)

Before operation

DPSS playback (KX-64W, A deck only)

DPSS is an abbreviation for Direct Program Search System. The DPSS requires unrecorded section of about 4 seconds or more between two adjacent selections. Therefore, it does not operate properly in the following cases.

1. Tape on which conversation is recorded which contains numerous interruptions lasting more than about 4 seconds.
2. Recordings of classical music mostly consisting of pianissimo parts.
3. Tape which contains a high noise or hum level between selections.
4. Tape on which unrecorded sections are less than about 4 seconds long.
5. Tape recorded at a low level.

Relay playback

1. Insert cassettes into A and B decks.
2. Press the play key (\triangleright) of A deck, then press the play key (\triangleright) of B deck. When the tape on A deck reaches the end, the tape on B deck starts playback.

Note:

When the upper DUBBING switch is pressed, B deck does not operate.

DPSS selection (KX-64W, A deck only)

With the DPSS operation, the beginning or end of the current selection can be reached easily.

1. Press the rewind key ($\triangleleft\triangleleft$) during playback to rewind the tape to the beginning of the current selection.
2. Press the fast forward key ($\triangleright\triangleright$) during playback to select the beginning of the next selection.

Tape recording (B deck only)

1. Depress the POWER switch.
2. Press the stop/eject key (\square/\triangle) of B deck to open the cassette holder and insert a cassette.
3. Press the TAPE SELECTOR switch according to the type of tape used.
4. To record with Dolby NR, select the Dolby NR with DOLBY NR switches.
5. Play the program source.
6. Press the PAUSE key, then press the REC key. The unit enters rec pause mode.
7. Adjust the REC LEVEL control and the REC BALANCE control by observing the PEAK LEVEL meter.
8. Press the PAUSE key. Recording will begin.
9. To stop recording momentarily, press the PAUSE key. To terminate recording, press the stop/eject (\square/\triangle) key.

Notes:

1. B deck does not operate when the DUBBING switch is depressed.
2. Current recording is not possible with the high-speed DUBBING switch pressed.

Synchro recording (PHONO to TAPE) (KX-64W only)

With this feature, synchronized recording from turntable KD-74F, KD-64F is possible.

1. Connect the turntable to this unit with the synchro cord as shown in page 4.
2. Set the DUBBING switch to ON.
3. Insert a blank tape into B deck.
4. Set the TAPE SELECTOR switch according to the type of tape inserted into B deck.
5. Select Dolby NR.
6. Press the REC key of B deck. The B deck enters the rec pause mode.
7. Press the dubbing key of the turntable, then press the play/cut key.
8. When the record play starts, the recording starts.

Tape-to tape dubbing (from A deck to B deck)

1. Press the upper DUBBING switch.
2. Select the normal or high speed dubbing with the lower switch.
3. Insert a recorded tape into A deck and insert a blank tape into B deck.
4. Press the TAPE SELECTOR switch according to the type of tape inserted into B deck.
5. Press the REC key of B deck.
6. When the play key (\triangleright) of A deck is pressed, the dubbing starts.
7. To stop dubbing momentarily, press the PAUSE key on B deck.
8. To terminate dubbing, press the stop/eject keys (\square/\triangle) on both A and B decks.
9. Set the DUBBING key to OFF when dubbing is finished.

Notes:

1. During dubbing, the Dolby NR does not function.
2. Do not change the dubbing speed from normal to high or vice versa while dubbing is in progress.
3. Do not use a timer for the dubbing procedure.

● Dolby NR effect after tape dubbing

If a tape recorded with Dolby NR is dubbed, the tape in deck B will also be a tape with Dolby NR; if a tape recorded without Dolby NR is dubbed, the tape in deck B will also be a tape without Dolby NR, regardless of the

position of the DOLBY NR switches. In any case, the sound is monitored without Dolby NR while dubbing.

High-speed dubbing

To dub at a high speed, press the high speed DUBBING switch ($\triangleright\triangleright$) instead of the DUBBING switch (\triangleright).

Note:

When B deck is stopped while dubbing, A deck is set to normal playback mode.

Timer stand by operation

By using the built-in TIMER STAND BY mechanism in combination with an audio timer (available from many dealers), the deck begins to record or play at any desired time.

Unattended recording

1. Connect the power cords to the components and set the timer so that power is supplied to each component. (Timer setting procedures vary with the type of timer used. Follow the instructions of the timer's manual.)
2. Turn on the power switches of the components to be used for recording.
3. Tune to the station desired and set the record level. (Refer to "Recording level".)
4. Set the volume control of the amplifier to its minimum setting.
5. Set the timer to the required time referring to the timer's instruction manual so that the power will be switched ON at the preset time.
6. Press the record key (REC).
7. Power to the components will be switched ON at the preset time and recording will start.
8. Recording stops when the tape end is reached.

Note:

To ensure that the automatic shut off switch operates before the power is shut off, set the timer so that it operates for a little longer than the playing time of the tape.

Timer-controlled playback

1. Connect the timer as described for "Unattended recording".
2. Set the timer so that power is supplied to each component.
3. Turn on the power switches of the components used for playback.
4. Load a recorded tape and set each switch referring to "Playback procedure".
5. Adjust the volume control of the amplifier.
6. Rewind the tape to the start.
7. Set the timer to the required time.
8. Press the play (\triangleright) key.
9. The tape will automatically start playback at the preset time.

Notes:

1. Do not use a timer for the dubbing procedure.
2. Use either A or B deck for a timer-playback.

Full automatic stop mechanism

When the tape is fully wound or rewound after recording, playback, rewinding or fast-forwarding, the full automatic stop mechanism resets the function to prevent the pinch roller or the tape from being deformed.

Important aspects of cassette tape

Types of cassette tape

Modern cassette tapes are formulated from several compounds that have slightly different magnetic properties. To obtain the best results, your recorder should be adjusted to meet the requirements of each type. Your cassette tape deck provides the means to adapt to the major types of tape in current use.

Generally, conventional (normal) tapes are adequate for recording speech and other material where fidelity is not a prime requisite.

For best results when recording music, a Low-Noise/High Output (Normal), Chrome (CrO₂), Ferro-Chrome or Metal tape should be used.

Recording time

Cassettes conform to an international standard to ensure operation and interchangeability between machines designed to work with cassettes of a common basic type. Recording time is designated by the "C number" printed on the cassette. For example C-60 cassettes record or play for 30 minutes on each side (total time of 60 minutes). Cassettes marked C-46 and C-90 record or play for 46 and 90 minutes respectively.

Care and handling of cassettes

Loose tape – To prevent tape jams, inspect the cassette for loose tape before putting the cassette into your deck. Wind up loose tape using a pencil as shown in Figure 5.

To preserve valuable recordings – Prized recordings are sometimes erased accidentally by putting deck into the record mode. To ensure protection, break off the plastic record-lockout tab for the side you wish to protect as shown in Figure 6. Your deck cannot be put into the record mode when this tab is broken off. Use a small screwdriver or other pointed tool to break off the tab. To re-record onto a tape, apply plastic tape to cover the detection hole (Fig. 7).

C-120 cassettes – Take particular care in the use of C-120 cassettes. The tape used in these cassettes is very thin and tends to stretch or wind up on the capstan or pinch roller. It is advisable to avoid the use of C-120 cassettes when very important recordings are to be made.

To store cassette tape – The cassette shells and tape are liable to be damaged by heat. Do not store cassette tapes in a place exposed to direct sunlight. To protect valuable recordings, do not place cassette tapes in a magnetic field and do not place a magnet near the cassette tapes (Fig. 8).

Tape compatibility

Your stereo tape deck can play cassettes recorded on monaural cassette recorders. As shown in Figure 9, the single track straddles the left and right heads of your stereo recorder. Similarly a monaural recorder will play back recordings made on your deck. Of course, monaural audio is reproduced in either case.

Insert pencil into reel hub and turn until slack is taken up.

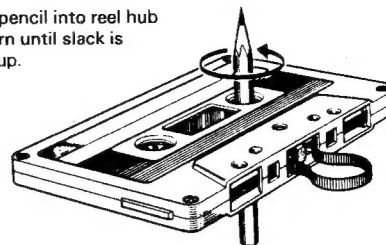


Fig. 5

To protect valuable recordings, break off tab using screwdriver or similar tool.

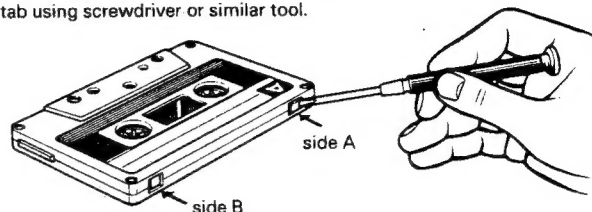


Fig. 6

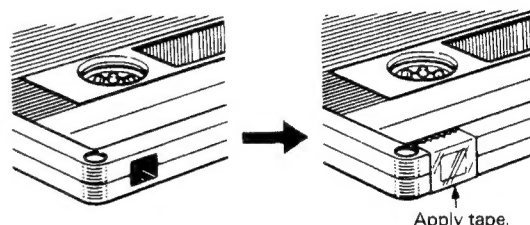


Fig. 7

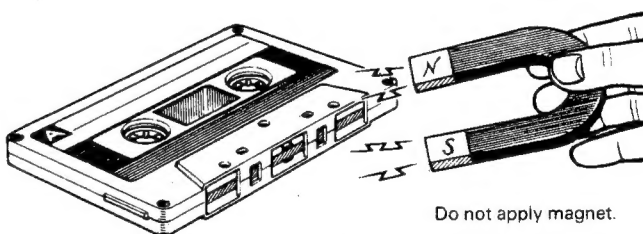


Fig. 8

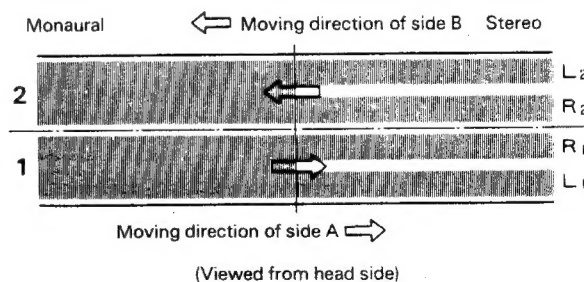


Fig. 9

Cassette tape and tape selector

This tape deck has been adjusted in the factory using the following tapes.

NORMAL..... KENWOOD ND-60
CrO₂..... KENWOOD CD-60
METAL..... KENWOOD MD-60

When your tape deck has three positions selector

Tape selector settings

Set the TAPE SELECTOR switches to match the characteristics of the tape you have chosen in accordance with the settings shown in Table 1.

Table 1
Types of Tapes and Tape Selector Settings (Example)

MAKER	TYPE OF TAPE	TAPE SELECTOR SETTINGS	
		RECORD-ING	PLAY-BACK
KENWOOD TDK FUJI SONY MAXELL SCOTCH BASF MEMOREX AGFA AMPEX PHILIPS	N, ND D, AD (-X), OD FL, FX-I SHF, HFX, LNX UD, XL I-S, LM DYNARANGE, MASTER I LH, FERRO SUPER LH I (PROFESSIONAL I) MRX I FERRO COLOR, SUPERFERRO GM I, EDR, ELN FERRO, SUPER FERRO	NORMAL	NORMAL
SONY SCOTCH BASF AGFA PHILIPS	Fe-Cr MASTER III FERROCHROME, PROFESSIONAL III CARAT FERROCHROMIUM	NORMAL	CrO ₂
KENWOOD TDK FUJI SONY MAXELL SCOTCH BASF MEMOREX AGFA AMPEX PHILIPS	CD SA (-X) FX-II EHF XL II-S, MASTER II CHROMDIOXID SUPER II, PROFESSIONAL II HIGH BIAS II STEREO CHROME, SUPERCHROME GM II CHROMIUM, ULTRACHROME	CrO ₂	CrO ₂
KENWOOD TDK FUJI SONY MAXELL SCOTCH BASF MEMOREX AGFA AMPEX PHILIPS	MD MA (-R) METAL METALLIC MX METAFINE METAL IV METAL IV PURE METAL MPT METAL	METAL	METAL

Tapes which can be used with the automatic tape selector

Use chrome and metal tapes with detection holes as shown in the Fig. 10. If tapes without detection holes are used, the automatic tape selector will not function, resulting in poor sound quality.

When your tape deck has auto tape selector

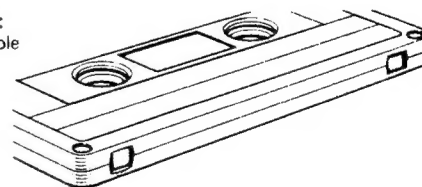
Tape selector settings

Understanding of the characteristics of cassette tapes is required to enable optimum recording and playback. Typical types of cassette tape are as shown in Table 2.

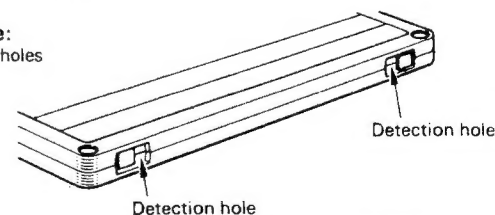
Table 2
Types of Tapes and Auto Tape Settings (Example)

TAPE SELEC-TOR SETT-INGS	MAKER	TYPE OF TAPE
NORMAL	KENWOOD TDK FUJI SONY MAXELL SCOTCH BASF MEMOREX AGFA AMPEX PHILIPS	N, ND D, AD (-X), OD FL, FX-I SHF, HFX, LNX UD, XL I-S, LM DYNARANGE, MASTER I LH, FERRO SUPER LH I (PROFESSIONAL I) MRX I FERRO COLOR, SUPERFERRO GM I, EDR, ELN FERRO, SUPER FERRO
CrO ₂	KENWOOD TDK FUJI SONY MAXELL SCOTCH BASF MEMOREX AGFA AMPEX PHILIPS	CD SA (-X) FX-II EHF XL II-S MASTER II CHROMDIOXID SUPER II, PROFESSIONAL II HIGH BIAS II STEREO CHROME, SUPERCHROME GM II CHROMIUM, ULTRACHROME
METAL	KENWOOD TDK FUJI SONY MAXELL SCOTCH BASF MEMOREX AGFA AMPEX PHILIPS	MD MA (-R) METAL METALLIC MX METAFINE METAL IV METAL IV PURE METAL MPT METAL

Normal tape:
No detection hole



Chrome tape:
Two detection holes



Metal tape:
Four detection holes

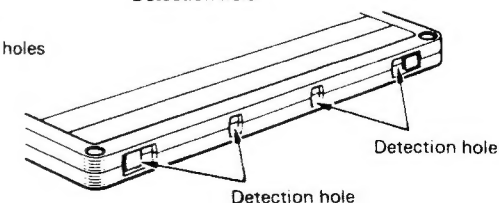


Fig. 10

Maintenance

As the tape rubs against the heads during recording and playback, oxide debris from the tape accumulates on the heads, guides, and pinch roller. To maintain the optimum recording and playback performance, periodically clean the entire tape path, including the heads (about every 10 hours of use).

Cleaning the heads section

1. Press the Stop/eject key and the cassette holder will slide forward.

2. Clean the heads, pinch roller and capstan with a cotton swab slightly dampened with cleaning solvent (or denatured alcohol).

Note:

The heads and guides in the tape path are precisely adjusted. Do not exert excessive pressure on any parts while cleaning.

Specifications

Type	Stereo double cassette deck with Dolby B.C NR System
Track System	4-track, 2-channel Stereo/Mono, Recording/Playback
Recording System	AC Bias System (Bias Frequency: 105 kHz)
Erasing System	AC System
Tape Speed	4.76 cm/sec (1-7/8 ips)
Heads	(Deck A) Playback Head x 1 (Hard Permalloy Head) (Deck B) Record and Playback Head x 1 (Hard Permalloy Head) Erase Head x 1 (Double Gap Ferrite)
Motor	2 motors: Electronically Controlled DC Motor
Fast Winding Time	Approx. 105 seconds with C-60 tape
Frequency Response:	
Normal Tape	20 Hz to 15,000 Hz (30 Hz to 14,000 Hz, ± 3 dB)
CrO ₂ Tape	20 Hz to 16,000 Hz (30 Hz to 15,000 Hz, ± 3 dB)
Metal Tape	20 Hz to 16,000 Hz (30 Hz to 15,000 Hz, ± 3 dB)
Signal-to-Noise Ratio:	
Dolby C Type NR ON	72dB (KX-64W) (Metal Tape)
Dolby B Type NR ON	65dB (KX-64W) (Metal Tape) 64dB (KX-644W) (Metal Tape)
Dolby NR OFF	56 dB (Metal Tape)

Harmonic Distortion	Less than 0.5% (at 1 kHz, OVU with Metal Tape)
Wow and Flutter	$\pm 0.28\%$ (DIN), 0.09% (W.R.M.S.)
Input Sensitivity/Impedance:	
LINE x 2	77.5 mV/50 kohms
Microphone x 1	0.8 mV/4.7 kohms
Output Level/Load Impedance:	
LINE x 2	270 mV/3.9 kohms
Headphones x 1	0.2 mW/8 ohms
Power Consumption	20 watts
Dimensions	W: 420 mm (16-9/16") H: 123 mm (4-13/16") D: 269 mm (10-9/16")
Weight	4.5 kg (9.9 lb)
Reference Tapes	Normal: KENWOOD ND-60 TDK AD C-60 CrO ₂ : KENWOOD CD-60 TDK SA C-60 Metal: KENWOOD MD-60 TDK MA C-60

Note:

We follow a policy of continuous advancements in development.

For this reason specifications may be changed without notice.

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